EFFECT OF YOGIC PRACTICES ON MENTAL HEALTH AND ADJUSTMENT OF VISUALLY-IMPAIRED STUDENTS

SYNOPSIS

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By

Namrata Athwani

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Co-supervisor

Dr. Indu Sharma

Assistant Professor, Department of Yogic Sciences

Morarji Desai National Institute of Yoga, Delhi

Supervisor

Dr. Manoj Sahu

Assistant Professor,

Dept. of Pedagogy, LNIPE, Gwalior

DEPARTMENT OF YOGIC SCIENCES

LAKSHMIBAI NATIONAL INSTITUTE OF PHYSICAL EDUCATION

Abstract

This study explores the impact of yogic practices on the mental health and adjustment levels of visually-impaired students, a group that often faces unique psychological and social challenges. With visual impairment affecting cognitive, emotional, and social development, it is crucial to find accessible and effective interventions that enhance well-being. Yoga, known for its holistic benefits, is increasingly recognized as a supportive tool for improving mental and emotional resilience. This research investigates whether regular yogic practices—comprising asanas-physical postures, pranayama-breathing techniques, and dhyana-meditation—can contribute significantly to the mental health and psychosocial adjustment of students with visual impairments.

The study employs a quasi-experimental pre-test and post-test design with control and experimental groups, targeting visually-impaired students aged 15–30 years from specialized institutions. Standardized psychological tools are used to measure variables such as anxiety, depression, self-concept, and social adjustment before and after an intervention period of 12 weeks. The yogic program is tailored to the sensory needs and capabilities of visually-impaired participants to ensure inclusivity and safety.

Preliminary findings indicate a positive correlation between consistent yogic practice and improvements in emotional stability, stress reduction, and interpersonal adjustment. Participants report greater self-awareness, increased concentration, and enhanced coping mechanisms in both academic and social contexts. The results underline the potential of yoga as an integrative, non-pharmacological approach to support the psychological development and social integration of visually-impaired students.

This research contributes to the fields of special education, mental health, and yogic science, advocating for the inclusion of yoga in special needs education frameworks. It highlights the necessity for further large-scale, longitudinal studies to strengthen evidence and inform policy and curriculum development.

Keyword: mental health, adjustment levels, visually-impaired students, yogic Practices, asana, pranayama, meditation

DEPARTMENT OF YOGIC SCIENCES

Certificate

I hereby declare that the synopsis " **EFFECT OF YOGIC PRACTICES ON MENTAL HEALTH AND ADJUSTMENT OF VISUALLY-IMPAIRED STUDENTS** " being submitted in the partial fulfilment of the requirement for the degree of Doctor of Philosophy in Yogic Science under the Department of Yogic Sciences, Lakshmibai National Institute of Physical Education Gwalior - 474002 during the academic year 2021-2022.

It is a bonafide record of original work carried out under the supervision of **Dr. Manoj Sahu (**Assistant Professor, Dept. of Pedagogy, LNIPE, Gwalior**)** and co-supervision of **Dr. Indu Sharma (**Assistant Professor, Morarji Desai National Institute of Yoga, Delhi) and has not been submitted in full or part to any other university or institute for a degree or diploma.

Namrata Athwani

(PH2021-04)

Dr. Manoj Sahu

Assistant Professor,

Dept. of Pedagogy, LNIPE, Gwalior

(Chairperson, DRC)

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Chapter-I

Introduction

Children with visual impairments may face difficulties that result in their experiencing emotional disturbances. There are various reasons for mood disorders among children with vision loss, such as reduced mobility (Kef, Hox, & Habekothe, 2000), loneliness (Hadidi & Al Khateeb, 2013), fewer opportunities to learn social skills (Hatlen, 2004), and greater dependency on help (Sacks, Kekelis, & Gaylord-Ross, 1992). Moreover, less participation in leisure-time activities may contribute to children having an increased risk of mood disorders (Augestad & Jiang, 2015; Brunes, Flanders, & Augestad, 2015). Additionally, children with vision loss may find it hard to predict other people's behavior and reactions from their facial expressions of their emotions (Pinquart & Pfeiffer, 2013). Impairments in vision are highly prevalent, affecting roughly 2.2 billion people worldwide (World Health Organization,) Of these individuals, approximately 36 million are blind, and an estimated 217 million have marked (i.e., moderate-to-severe) visual impairment (Bourne et al, 2017). In the US, age-related vision loss is a leading cause of disability among aging adults, primarily resulting from eye diseases such as macular degeneration, cataracts, glaucoma, and diabetic retinopathy. Consequently, as increases in longevity raise the average age of the population, the incidence of visual impairment is also projected to grow, with global rates of blindness tripling and moderate-to-severe vision impairment doubling over the next 30 years (Bourne et al, 2017). As the prevalence of vision impairments continues to rise, so does the need to better understand the wide-ranging impact of these impairments on an individual's mental health, quality-of-life, and overall well-being.

Vision impairments often result in significant disability and are associated with a substantial economic burden (estimated at more than $3 trillion globally) attributable to both direct and indirect (eg, productivity loss) costs (Gordois, Cutler, Pezzullo, et al., 2012). In addition to the economic impact of blindness and vision loss, vision impairment is associated with reduced quality-of-life, unintentional injuries and loneliness. Moreover, individuals with visual impairment may be at greater risk for developing mental health problems, such as depression and anxiety (Nyman, Gosne, Victor, 2010). However, because vision loss is

conceptualized as a physical problem, the psychological sequelae of vision impairment may be under-recognized. In this review we examine the prevalence, development, and treatment of mental health problems in visually impaired populations.

What is Yoga?

Yoga is one of India's greatest gifts to the world. It has been practiced in India since times immemorial. It is a combination of religion, philosophy and physical culture into one complete science. Yoga refers to union between body and mind or body, mind and spirit. The traditional connotation of yoga is union between the jivatma and parmatma that is between one's individual consciousness and the universal consciousness therefore yoga refers to a certain state of consciousness as well as to methods that help one reach that goal or state of union with the divine. Yoga is a movement based on form of relaxation and meditation that combines physical postures, exercises and breathing to promote physical mental and spiritual well-being. In yoga, breath work is known as Pranayama. Pranayama comprises 'Poorak', 'Kumbhak', & 'Rachek' which means inhalation & exhalation with the arrest of breathing process internal & external. By regular practice of Pranayama, pran shakti is being distributed through the body and invigorates all the seven charkas, purifies the mind and streamlines all the systems of the body thereby increasing the longevity. There are various types of Pranayama to be performed as per the bases of need & season. Long & deep breathing, bhastrika, kapalbhati, agnisar, anulomvilom, bhramri, ujjayi, sheetli, nadishodhan are quite prominent. Yoga improves fitness, lowers blood pressure, promotes relaxation and self- confidence, and reduces stress and anxiety. People who practice yoga tend to have good coordination, posture, flexibility, range of motion, concentration, sleep habits and digestion. Yoga is a complementary therapy that has been used with conventional therapies to help treat a wide range of health problems but it is not, in and of itself, an effective cure for any particular disease. Some forms of yoga were found to have significant anti-depressant effects (Murthy et al. 1998). Yoga is an ancient Indian science and way of life which brings about relaxation and also induces a balanced mental state. Yoga: Pranayama is our personal physician (Swami Ramdev). As a holistic system, yoga deals with the body, mind and behaviour in a synergistic way. The word Pranayama is a combination of two Sanskrit words: Prana and ayama, which means expansion of vital energy. According to these texts vital energy

is absorbed in subtle form through breathing and in Pranayama this vital energy is expanded. This information that Pranayama enhances oxygen supply to the head which is received from classical texts has been subjected to empirical testing and it was reported that during Pranayama oxygen consumption has increased as compared to normal breathing (Karambelker, Deshpande, Bhole, 1982)

Yoga, Mental Health and Adjustment

People have a general belief that the term 'mental health' simply refer to the absence of a mental disorder. But this seems to be quiet far from exact definition of mental health as the much comprehensive definition is viewed by the psychologists. Mental health is generally is generally viewed by psychologists as the cognitive, behavioral and emotional state of well-being. The way people think, they feel and they behave, reflect the mental health in general. Mental health affects every aspect of daily life including relationships, social and physical health. Anxiety is a mood state characterized by marked negative affect and somatic symptoms of tension in which a person apprehensively anticipates future danger or misfortune (Barlow, 1988). This is also the DSM-IV definition (American Psychiatric Association, 1994). Anxiety is a state of uneasiness and apprehension, as about future uncertainties. According to the U.S. Surgeon general, 13 percent, or over 6 million children, suffer from anxiety, making it the most common emotional problem in children. Anxiety is often described as having cognitive, somatic, emotional and behavioral components. The cognitive component entails expectations of a diffuse and uncertain danger somatically the body prepares the organism to deal with threat, blood pressure and heart rate are increased, sweating is increased, blood flow to the major muscle groups is increased and immune and digestive system functions are inhibited. Externally, somatic signs of anxiety may include pale skin, sweating and trembling. Emotionally, anxiety causes a sense of dread or panic and physically causes nausea, and chills. Behaviorally, both voluntary and involuntary behaviors may arise directed at escaping or avoiding the source of anxiety. These behaviors are frequent and often maladaptive, being most extreme in anxiety disorders. However, anxiety is not always pathological or maladaptive: It is a common emotion along with fear, anger, sadness and happiness and it has a very important function in relation to survival.

On other hand, adjustment is the term to indicate a behavioral process of maintaining balance among needs, whether they are conflicting or challenged by environmental-obstacles. Not only humans but animals also, regularly keep adjust to their environment. For example, due to the physiological needs, both humans and animals tend to seek food in order to reduce their hunger and subsequently adjust to the hunger stimulus. Inability to make a normal adjustment or dealing with needs or stress in the environment may lead to adjustment disorder. Adjustment is a response that removes (or reduces) the stimulus. Effective adjustment is crucial for high quality of life. We can say that conflict and other types of frustration that block the individual's progress towards a goal provide one source of anxiety. Threat of physical harm, threats to one's self-esteem and pressure to perform beyond one's capabilities also produces anxiety. Freud saw anxiety as the psychic reaction to danger surrounding the reactivation of an infantile fear situation. Behaviorally oriented theorists view anxiety as a product of early classical conditioning or other forms of learning such as modeling (Bandura, 1986). Depression is the state of helplessness and hopelessness with a feeling of loneliness and poor self-image. It is an affective disorder characterized by a disturbed mood or feeling. Depression affects physical, mental and emotional well-being. Daily fatigue, lack of energy, insomnia and hypersomnia are indicators of a depressed mood. Some researchers report that 89% of people with depression feel fatigue. Depressed persons typically experience high levels of anxiety and intense anger that is turned inward, resulting in feelings of low self-esteem, hopelessness and thoughts of death. The key for management of anxiety & depression is the positive evaluation of the situation. This is possible through yoga. Yoga is a way of life. Yoga considers a human being as a whole-body, mind and spirit together. Disintegration of this personality leads to negative mood states. Yoga aims at harmonizing the physical, mental & spiritual aspects of the personality. Yoga is found to be a holistic method to restore balance of physical, mental and spiritual energy whereas anxiety is more likely to be the cause of imbalances.

Statement of the Problem

The statement of the problem will be stated as **" Effect of Yogic Practices On Mental Health And Adjustment Of Visually-Impaired Students"**

Objectives of the Study

1. To characterized the level of mental health such as egocentrism alienation expression emotional stability social non-conformity among visually-impaired students.

2. To characterized the level of adjustment such as home adjustment, health adjustment, social adjustment, emotional adjustment and school or college adjustment among visually-impaired students.

3. To compare the mean score of adjustment of college students at pretest and posttest stage of Experimental group.

4. To compare the mean score of mental health of college students at pretest and posttest stage of Experimental group.

Delimitations of the Study

1. This study will be focus on mental health and adjustment of visually-impaired students.
2. Intervention will be delimited to some of the Yogic Practices are as
   Yoga prayer- 5min.
   Suksh vyayam – 5 min
   Surya namaskar- 10 min
   Asanas – 10 min
   Pranayam-10 min
   DRT – 5 min. etc.
3. This study will be focus on adolescents only.

LIMITATIONS

Socio-economic status, facilities, training, geographical conditions, etc. which may affect the results of the study which will be consider as limitation of the study.

Hypotheses of the Study

1. There is no significant difference between pretest and posttest mean score of adjustment, mental health of college students of experimental group.
2. There is no significant difference of adjusted means of mental health and adjustment by considering covariate of pre score of mental health adjustment.

Definition and Explanation of Terms

- **Visual impairment:** Visual impairment can be defined as the partial or complete loss of vision.
- **Mental Health:** Mental health refers to the state of cognitive, behavioral and emotional well-being.
- **Adjustment:** Adjustment is the behavioral process by which one maintains a state of balance among various needs or between needs and environmental hindrances.
- **Yogic Activities:** Yogic activities refer to the activities of belonging to various Pranayama, Surya-namaskar, and asanas.

Significance of the Study

The role of Yoga has been found crucial in a number of studies as well as in general observation. Because this study will include certain yogic activities, such as Surya-namaskara, Nadi-shodhan Pranayama, Bramari Pranayama Udgeet Prannayama, the results of this study will be significant in understanding the efficacy of introduced Yogic practices in reducing the mental health problems as well as in facilitating the adjustment among visually-impaired students.

Visual impairment is associated with a number of mental health as well as adjustment problems of the findings of this research will be helpful in incorporating a Yogic intervention plan for college students with visual impairment.

Chapter-II

Literature Review

It was shown that long term practitioners of yoga have a remarkable voluntary control over these autonomic processes, which helps them in coping with psychological distress (Rao, 1995). Yoga therapy group subjects are not only benefited physiologically but their psychological responses are also improved. The findings support the view held by earlier studies on Yoga therapy and its psychological benefits (Vahia, 1969, Naug, 1975, Datey, 1969).

Jain and Sharma (2017) studied the effect of Pranayama on Anxiety & Depression. 120 persons (60 males & 60 females) were selected with purposive sampling method, for this study. Life style questionnaire and Eight State Questionnaire were used to assess the dependent measures. The results of this study showed that the yoga pranayama had positive effect in the management of Anxiety & Depression as well as in creating positive image about oneself in the experimental group while control group didn't show any significant difference.

Bussing, Michalsen, Khalsa, Telles, and Sherman (2012) conducted a meta-analysis to examine the effects of yoga interventions on various components of mental and physical health. The heterogeneity among interventions and conditions studied has hampered the use of meta-analysis as an appropriate tool for summarizing the current literature. Nevertheless, there are some meta-analyses which indicate beneficial effects of yoga interventions, and there are several randomized clinical trials (RCT's) of relatively high quality indicating beneficial effects of yoga for pain-associated disability and mental health. Yoga may well be effective as a supportive adjunct to mitigate some medical conditions, but not yet a proven stand-alone, curative treatment. Larger-scale and more rigorous research with higher methodological quality and adequate control interventions is highly encouraged because yoga may have potential to be implemented as a beneficial supportive/adjunct treatment that is relatively cost-effective, may be practiced at least in part as a self-care behavioral treatment, provides a life-long behavioral skill, enhances self-efficacy and self-confidence and is often associated with additional positive side effects.

A recent meta-analysis on pain intensity/frequency, and pain-related disability was carried by Bussing, A., Ostermann, Ludtke, and Michalsen (2012). Reviewed studies included yoga for the treatment of back pain (6 studies), rheumatoid arthritis (2 studies), headache/migraine, and other indications (i.e., hemodialysis, irritable bowel syndrome, labor pain, etc.). All of these studies reported positive effects in favor of the yoga interventions. There were moderate treatment effects with respect to pain and pain-related disability. Despite some study limitations, there was evidence that yoga may be useful for several pain-associated disorders. Thus, well-designed larger scale studies with adequate controls for confounding factors and more thorough statistical analyses are needed to verify these promising findings.

Posadzki, Ernst, Terry, and Lee (2011) on the basis of their literature review, reported significantly greater effects in favor of yoga when compared to "standard care, self-care, therapeutic exercises, relaxing yoga, touch and manipulation, or no intervention.

Roland, Jakobi, and Jones (2011) evaluated whether yoga can engender fitness in older adults. Ten studies with 544 participants were included. With respect to physical fitness and function, the studies reported moderate effect sizes for gait, balance, body flexibility, body strength, and weight loss. However, there is still a need for additional research trials with adequate control interventions (active and specific) to verify these promising findings. One may expect that retaining physical fitness and improving physical functioning can have a positive effect on functional abilities and self-autonomy in older adults. Further studies should address whether or not individuals' self-esteem and self-confidence will increase during the courses, and whether or not regular classes may also improve social competence and involvement. A problem with studies enrolling elderly subjects can be compliance with the study protocol leading to low levels of study completion and long-term follow-up data. Future studies should investigate the most appropriate duration of yoga intervention and the most suitable postures and yoga style for the elderly.

Gururaja, Harano, Toyotake, and Kobayashi (2011) conducted a study in Japan to find the effect of yoga on mental health between young and senior people. Twenty-five normal healthy volunteers were taken for this study. Fifteen participants of the age group between 65 to 75 years and 10 participants of the age group between 20 to 30 years were selected. The findings of this study reported a decrease in salivary amylase activity may be due to reduction in

sympathetic response. Reduction in State and Trait anxiety score signifies that yoga has both immediate as well as long-term effect on anxiety reduction. Thus yoga helps to improve the mental health in both the groups.

Another systematic review by Aljasir et al. (2010) addressed the management of type 2 diabetes mellitus and concluded that the reviewed trials suggest favorable effects of yoga on short-term parameters related to diabetes but not necessarily for the long-term outcomes. However, the duration of treatment in the reviewed studies was variable (ranging from 20 min. session per day to three to five 90 minute sessions; 3-4 h per day for 8 days, 2 sessions per day (25–35 min) for 3 months to 40 min per day for 6 months, and 72 4 h sessions during 12 months in the review by Innes and Vincent.

Swami Ramdev, Yog synergy in medical science, (2007) revealed that yoga and Pranayama are not merely physical exercises but they strongly influence our consciousness. Yoga and Pranayama have a direct positive impact on our thinking. Yog and Pranayama have also led to lot of reduction in negative mood states. The present life style and anxiety has adversely affected memory power of lot of people and they also got a chance to rejuvenate after coming into the shelter of Yog. During the survey some results were seen on thinking processes. The results of the survey revealed that Yog and Pranayama have proved to be a blessing for the people suffering with mental anxiety & depression even in the present modern world. Yog and pranayama improves concentration power. As a result the memory power increases. A brief review of literature on the psychotherapeutic effects of yoga revealed that yoga has proven effective as a mode of treatment for psychological distress.

Innes, Bourguignon and Taylor (2005) reviewed thirty seven studies to investigate the effects of yoga on blood pressure and hypertension, among them 12 RCTs, 12 nonrandomized clinical trials, 11 uncontrolled studies, 1 cross-sectional study, and 1 single yoga session examination. Most reported a reduction of systolic and/or diastolic pressure. However, there were several noted potential biases in the studies reviewed (i.e., confounding by lifestyle or other factors) and limitations in several of the studies which makes it difficult to detect an effect specific to yoga. These studies reported post-intervention improvement in various indices in adults. However, the results varied by population (healthy adults, adults at cardiovascular disease risk, adults with type 2 diabetes, etc.) and study design.

Verma (1997) reported that yoga practice was as effective as drug therapy in treating psychological disturbance. The effect of yoga practice lasted for over two years with signs of continuing improvement and in addition to alleviation of ill health; there was also a positive sense of well- being which was not observed in drug therapy. Prem Sahajpal and Rinpari Ralte, (2000) have shown very beneficial effects on quality of sleep, reduction in stress level & improvement in self-concept by IYRT (Induced Yogic Relaxation Training).

Latha, D. and kaliappan, K.V. (1987) have suggested that they had a significant improvement in coping behavior. It is suggested that YT is superior to drug therapy in controlling headaches. N. Jhansi Rani (2002) investigated the practice of a specific yogic procedure that enhances oxygen supply to the head will improve one's performance on a cognitive task. A training course in Yoga was found to have led to highly significant improvement in the subjects' mental health (Aminabhavi, 1996). Some forms of Yoga were found to have significant antidepressant effects (Murthy et al. 1997). Yogic meditation was also effective in reducing tension headache (Vasudevan, Mishra & Balodi, 1994). It was also found that distressing physiological and psychological changes during the course of menstrual cycle could also be reduced with the help of Yoga practice (Sridevi & Rao, 1998). Keeping the above studies in mind an attempt has been made to study the effect of Yogic Intervention: Pranayama on anxiety & depression.

Chapter-III

Method & Procedure of Research

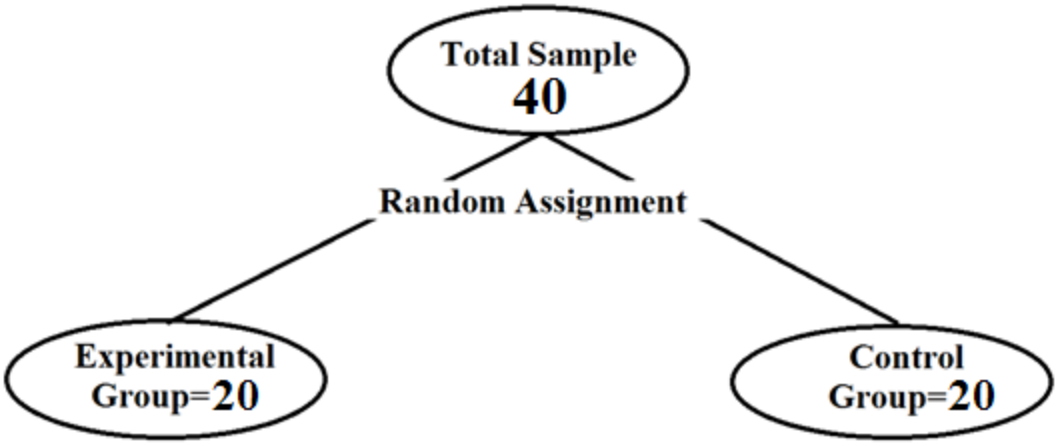
1. Research Design

After selecting the 40 college students of visual impairment, they were randomly divided into experimental and control group. Both of the groups will be assessed with the help of Mental Health inventory and Adjustment Inventory. After assessment, only experimental group will be trained for pre-scheduled Yogic practices and control group will not be given any type of training. Every student of experimental group would be instructed to do Yogic practices in the early morning every day for three months. The duration of Yogic practices will be 45 minutes. In other words the members of the experimental group will be observed every day for three months. After two months intervention, experimental and control groups again will be tested through Mental Health inventory and Adjustment Inventory. Between groups pre-post comparison of mean scores with regard to mental health and adjustment will be used to examine the effect of Yogic practices.

Group	Pre-assessment	Intervention	Post-assessment	Comparison
Experimental	M1	Three Month training	M2	M1-M2
Control	M1	No training	M2	M1-M2

Sample and Sampling

For this research, 40 visually impaired students studying in various visual impairment colleges and staying in hostels will be selected through systematic random sampling method. Subjects will be informed about the procedure and tenure of Yogic Practices. With *Coin-tossing* method subjects will be assigned to experimental and control groups.



Variables

The independent variable/s of the study will be:

a. Yogic Practices

The dependent variables of the study will be:

a. Mental Health Problems

b. Adjustment

Tests/Tools Used for Data Collection

Following two tests will be used to assess the health and adjustment status of college students:

1. **Mithilla Mental Health Status Inventory:** This inventory, developed by Dr. Anand Kumar and Dr. G. P. Thakur, consists of 50 items. This inventory measure five areas of mental health problems, such as egocentrismए alienation expression emotional unstability social non-conformity. The internal consistency for the various sub-scales ranges from .74 to .88 and test-retest stability ranges from .73 to .89. It's discrimination power is also quiet high.
2. **Adjustment Assessment Inventory:** Adjustment assessment inventory developed by Saxsena (1983) was used to identify the different adjustments among adolescents.

The inventory, consists of 90 items, provides five separate measures of adjustment, i.e. home adjustment, health adjustment, social adjustment, emotional adjustment and school or college adjustment. The test-retest reliability of this inventory ranges from .72 to .86 and validity is .80.

Yogic Intervention

S. No	Selected Yogic Practice	Duration
1	Loosening practices and Suryanamaskar	10-15 minutes
2	Asanas- Shashankasana, Padhastasana, Pashichimottanasana, Matsyasana, Suptvajrasana	5-10 minutes
3	DRT	5 minutes
4	Pranayama- Anulom-vilom, Bhramari, Udgeet	10-15 minutes
	Total	30-45 minutes

STATISTICAL PROCEDURE

Descriptive statistics will be used to characterize the levels of variables. to see the effect of yogic practice in mental health and adjustment of visually impaired college students at 0.05 level of significance.

Expected Outcome

The study investigating the impact of yogic practices on the mental health and adjustment of visually impaired students revealed significant positive outcomes. Participants who engaged in a structured yoga program demonstrated notable improvements in various psychological and emotional dimensions.

Specifically, the practice of yoga led to enhanced mental health, as measured by standardized assessments. Additionally, emotional maturity levels increased, indicating better emotional regulation and interpersonal relationships. Furthermore, the students exhibited improved adjustment levels, suggesting a better ability to cope with academic and social challenges.

These findings underscore the potential of integrating yogic practices into educational programs for visually impaired students, highlighting their role in fostering overall well-being and adaptability.

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